

INTRAVENOUS INJECTION TO & BLOOD COLLECTION FROM MICE IN-PERSON TRAINING

UNIVERSITY OF SOUTH FLORIDA
COMPARATIVE MEDICINE

Attendee Name: _____
Print Sign Date

Discuss/Review:

- ___ The **retroorbital sinus** is a system of venous channels behind the eye.
- ___ The **tail vein** is along the **lateral** side of the tail.
- ___ Blood can be collected from, or substances administered via the **retroorbital sinus** only when mice are isoflurane **anesthetized**.
- ___ **Intravenous (IV)** administrations can be made via the tail vein or retroorbital sinus.
- ___ **Tail vein** injections require **restraint** and **vasodilation**, but not anesthesia.
- ___ IV administrations of **multiple** injections over time requires planning to **preserve access**.

Demonstrate/Assess:

Tail Vein (IV) Injection

- ___ Place mouse in a **50ml conical tube with air holes drilled in it**.
- ___ Secure the mouse in the restrainer to a **raised** surface.
- ___ Paint **warm water** over the target vein with cotton tipped applicator stick.
- ___ Use a **27-30g** needle or 27g **butterfly catheter** for multiple dosing.
- ___ The tail is held **straight** and parallel to the table surface with **tension**.
- ___ Deliver the substance.

Retroorbital (RO) Sinus Injection

- ___ The mouse must be isoflurane **anesthetized**.
- ___ Use your **thumb** to apply pressure to the **external jugular** vein.
- ___ Use the **index finger** to pull the upper **eyelid back** and push the eye upwards.
- ___ Introduce a **25-30g** needle via the **medial canthus**.
- ___ The orbital bone beneath and behind the globe can be felt with the needle and used as a guide.
- ___ Care is taken to not apply undue pressure while administering.
- ___ Deliver the substance.
- ___ Bring the eye lids together and provide gentle pressure over the orbit.
- ___ Apply a lubricant to the eye.

Retroorbital (RO) Sinus Blood Collection

- ___ The mouse must be isoflurane **anesthetized**.
- ___ Use your **thumb** to apply pressure to the external jugular vein.
- ___ Use the **index finger** to pull the upper eyelid back and push the eye upwards.
- ___ Introduce a **hematocrit capillary tube** along the **medial canthus** just beside the eye.
- ___ Slight **rotation** of the capillary tube while advancing it assists.
- ___ Collect blood into the hematocrit tube or by drops into a blood collection tube.
- ___ Withdraw hematocrit tube, release jugular vein pressure.
- ___ Apply light pressure to the closed eyelids.
- ___ Ensure hemostasis.

Training & assessment provided by: _____
Print Sign Date

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